

**REMARKS****Status of the Claims**

Prior to further examination and in consideration of the final Office Action mailed May 9, 2005, applicant respectfully requests entry of the amendments made in this Submission and reconsideration in view of the foregoing amendments and for the reasons that follow.

Claims 1-26 were pending in the application. Claims 1, 14, 15, 16, 20, and 25-26 have been amended and no claims have been canceled or newly added. Therefore, claims 1-26 are pending in the application.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Applicant sincerely thanks the examiner for indicating that claims 21 and 22 are allowed.

**§ 112, First Paragraph, Rejection**

In the final office action, claims 1-14, 25, and 26 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Claims 1, 3, and 14 were amended (in the non-entered response filed on August 23, 2005) to address the issues raised in the office action, and applicant submits that the pending claims 1, 3, and 14 are fully supported by the specification and meet the requirements of section 112, first paragraph.

**Prior Art Rejection**

In the Office Action, some of the claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese patent document 08 104 219 (hereafter "JP '219") in view of U.S. Patent No. 4,749,239 to Onogi et al. (hereafter "Onogi"). Applicant respectfully traverses these rejections for at least the following reasons.

Each of the pending independent claims that are currently rejected, recite *inter alia* (1) a first estimated brake liquid pressure (Pb) estimated from the brake system;

(2) a second estimated brake liquid pressure ( $P_{WC}^{\wedge}$ ) estimated by inputting a road wheel acceleration into a vehicular model representing a vehicular characteristic; and

(3) a master cylinder liquid pressure estimating section ( $P_{MC}^{\wedge}$ ) which minimizes a difference between the first and second estimated liquid pressures.

This recited combination of features and their advantages is not disclosed or suggested by the applied prior art

The independent claims 1, 14, 15, 16, and 21 recite that by simultaneously deriving the estimated liquid pressure based on the brake system (unit) (feature 1 above) and the estimated liquid pressure based on the vehicular model (feature 2 above) and by mutually adjusting these derived pressures to be equal to each other, the estimated liquid pressure of the master cylinder is calculated. That is, the claimed invention provides an advantage over conventional prior art in which it is difficult to accurately estimate the liquid pressure only by the estimating liquid pressure based on either the brake system (unit) or the vehicular model. Hence, by separately deriving both of estimated liquid pressures and by adjusting both of the estimated liquid pressures so as to be mutually equal to each other, an accurate liquid pressure of the master cylinder can be estimated.

Neither these claimed features and nor their advantages are disclosed by the applied prior art. Specifically, in page 3, the office action asserts that the “the road wheel acceleration is used as the vehicular model”. The office action also asserts that Onogi uses the road wheel acceleration for the calculation of target liquid pressure  $P_y$  and uses the estimated liquid pressure  $P_x$  to equate to  $P_y$  within an upper limit and lower limit value. In this way, the office action asserts that the estimated liquid pressure  $P_x$  is determined based on the road wheel acceleration.

However, Onogi does not disclose the claimed features described above. In Onogi, equations (1), (2), and (3) disclosed in col. 2 do not represent the vehicular model. These equations merely represent PID control and do not consider the vehicular characteristic as recited in the pending independent claims. Specifically, equation (3) of Onogi (disclosed on col. 3 of Onogi) only integrates the errors of equations (1) and (2) (Proportional component) and variation rate of the error (differential component) but does not calculate the estimated liquid pressures with the vehicular characteristic taken into consideration. In sharp contrast, in the pending independent claims 1, 14-16, and 20, the second estimated wheel cylinder

liquid pressure can be obtained by inputting the road wheel acceleration into the *vehicular model in which the vehicular characteristic is represented*. This recited feature is not disclosed or suggested in Okazaki or Onogi or their reasonable combination.

The dependent claims are also patentable for at least the same reasons as the independent claims on which they depend. In addition, they recite additional patentable features when considered as a whole.

For example claims 25 and 26 recite a system (or method) in which a signal indicative of a road wheel acceleration is used as a separate factor in the calculation of the vehicle model which provides one of two concurrent inputs to the master cylinder liquid pressure estimating section (or step). Neither such a vehicular model nor the use of a signal indicative of a road wheel acceleration as a separate factor in the calculations in the vehicle model is disclosed by any of the applied references or their reasonable combination. Accordingly, this recited feature provides additional reasons for the patentability of these claims.

**Conclusion**

In view of the foregoing amendments and remarks, applicant believes that the application is in condition for allowance. If there are any questions regarding the application, or if an examiner's amendment would facilitate the allowance of one or more of the claims, the examiner is courteously invited to contact the undersigned attorney at the local telephone number below.

Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge deposit account No. 19-0741 for any such fees; and applicant hereby petitions for any needed extension of time.

Respectfully submitted,

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